

“North America’s limited capacity to import LNG has effectively restricted our access to the world’s abundant gas supplies ... thereby putting significant segments of the North American gas-using industry in a weakened competitive position.”

Former-Federal Reserve Chairman Alan Greenspan,
before the National Petrochemical and Refiners
Association Conference. San Antonio, Texas
(via satellite) April 5, 2005

“Given its physical properties, LNG cannot explode and because of this, LNG is an unlikely target for any terrorist activity.”

Shell Oil Company

“Should the unthinkable happen, the energy content of one standard liquid natural gas tanker, at 22 billion gallons of expanded gas, is equivalent to ... the explosive force on one LNG tanker, which is equal, roughly, to 55 Hiroshima bombs.”

From a popular magazine read by surfers

“Over my dead body.”

Automatic response from local fire chiefs

Is LNG safe?

It depends

A program of the
National Association of State Fire Marshals

It depends on...

- Site-specific risks, e.g.:
 - Neighboring facilities & infrastructure
 - Capacity of local emergency response: land and marine
 - Regional risks & conditions
- And how risks are communicated

But even in the most energy-starved regions
and where the risks may be managed ...
communities are saying 'no' to LNG

- Harpswell, Maine
- Fall River, Mass
- Long Island Sound

Is LNG safe?

How much risk is a community
willing to accept?

Who will the public trust? Why?

Who to trust? Fire safety officials

- Public safety and firefighter safety are Fire Chiefs' only agendas
- Overall credibility of fire service is high

Why?

- Departments are eager for neutral, credible information on LNG & LNG safety
- A Department can and will say 'no' if the risks are too great
- NASFM can assist Departments to work credibly through issues

Overview of “It depends ...”

- Funded by US Department of Transportation, in cooperation with the Federal Energy Regulatory Commission and US Coast Guard
- Additional expert advice from National Institute of Standards and Technology, FM Global Research, Massachusetts Institute of Technology, Univ. of Arkansas and four LNG terminal operators
- Pilot tested at two existing and two proposed LNG terminals in cooperation with the Southern States Energy Board
- Most effective early in process, but can be implemented at any point of project

Phase One:

Before the public review, a focused, hazards assessment should occur.

Discussions with LNG terminal developer on safety and security measures that address challenges posed by this site.

Phase Two

Open and honest public discussion of the risks and mitigation strategies identified in Phase One.

Coordination with FERC, US DOT, USCG, state officials and with independent outside experts.

FERC Process

Phase Three

Working with developer on emergency response plans and outreach.

Adequately training and equipping emergency responders.

Long-term partnership between fire service and operator.

Key Resources

NASFM's model for emergency responder & developer/operator cooperation includes:

- White Paper & videotape orientation
- Independent safety experts who may be consulted by local fire safety officials
- Model hazards assessment for fire service (to be developed)
- Coordination of outreach with local, county & state officials

Leads to:

- Fire Service is a credible, neutral resource to community on LNG safety
- Fire Service is an effective, long-term partner with operator, if terminal permitted

Conclusions

- LNG risks have to be examined at the site-specific level
 - It's not productive to overly generalize
- Trust-based relationship between emergency responders & developer/operator is necessary for safety
- NASFM program intended help fire service to make its own determination on LNG safety
 - Fire service is an equal partner to industry
 - Serves as a credible resource to community, whether favorable or unfavorable response to proposed terminal